Claims

1. A method comprising:

allowing a colloid particle to become immobilized indirectly relative to a non-colloidal structure; and

determining immobilization of the colloid particle relative to the non-colloidal structure.

2. A method as in claim 1 comprising:

providing an intermediate entity carrying a first immobilized biological or chemical agent suspected of being a binding partner of a second biological or chemical agent immobilized relative to the non-colloidal structure;

providing the colloid particle having known ability to become immobilized relative to the intermediate entity;

exposing the intermediate entity to the non-colloidal structure and exposing the colloid particle to the intermediate entity; and

determining binding of the first immobilized biological or chemical agent to the second biological or chemical agent by determining immobilization of the colloid particle relative to the non-colloidal structure.

3. A method as in claim 1, comprising allowing the colloid particle the ability to become immobilized relative to an intermediate entity which has the ability to become immobilized relative to the non-colloidal structure.

4. A method as in claim 3, wherein the colloid particle includes a self-assembled monolayer on a surface thereof.

5. A method as in claim 3, wherein the non-colloidal structure is a bead.

6. A method as in claim 5, wherein the bead is a magnetic bead.

7. A method as in claim 3, wherein the non-colloidal structure is an electrode.

8. A method as in claim 3, wherein the non-colloidal structure is a substantially planar substrate.

9. A method as in claim 8, wherein the non-colloidal structure is a chip.

10. A method as in claim 3, wherein the non-colloidal structure is a biological entity.

11. A method as in claim 10, wherein the biological entity is a cell.

12. A method as in claim 10, wherein the biological entity is a tissue section.

13. A method as in claim 3, wherein the intermediate entity is a particle.

14. A method as in claim 13, wherein the particle is a micelle.

15. A method as in claim 13, wherein the particle is a colloid particle.

16. A method as in claim 15, wherein the particle is a gold colloid particle.

17. A method as in claim 13, wherein the particle is a liposome.

18. A method as in claim 3, wherein the intermediate entity is a biological complex.

19. A method as in claim 18 wherein the intermediate entity is a protein.

20. A method as in claim 19, wherein the intermediate entity is an antibody/antigen complex.

21. A method as in claim 20, wherein the intermediate entity is a protein/DNA complex.

22. A method as in claim 18, wherein the intermediate entity is a protein/small molecule complex.

23. A method as in claim 3, wherein the intermediate entity is a dendrimer.

24. A method as in claim 3, wherein the intermediate entity is a polymer.

25. A method as in claim 3, wherein the intermediate entity is a drug.

26. A method as in claim 3, wherein the intermediate entity is an intermediate colloid particle, and the colloid particle is immobilized relative to the intermediate colloid particle via linkage that is the same or different as linkage by which the intermediate colloid particle is immobilized relative to the non-colloidal structure.

27. A method as in claim 26, wherein at least one of the linkage between the colloid particle and the intermediate colloid particle, or linkage between the intermediate colloid particle and the non-colloidal structure, comprises direct binding.

28. A method as in claim 27, wherein the direct binding comprises binding between members of a biological binding partner pair.

29. A method as in claim 26, wherein at least one of immobilization of the colloid particle relative to the intermediate colloid particle or immobilization of the intermediate colloid particle relative to the non-colloidal structure involves indirect linkage.

30. A method as in claim 29, wherein the indirect linkage involves Protein A or Protein G binding to an antibody.

31. A method as in claim 30, wherein the indirect linkage involves Protein A or Protein G including an affinity tag linkage to a self-assembled monolayer on a first colloid particle, the Protein A or Protein G bound to an antibody immobilized relative to a second colloid particle.

32. A method as in claim 31, wherein the affinity tag is a polyamino acid tag.

33. A method as in claim 32, wherein the polyamino acid tag is a histidine tag.

34. A method as in claim 3, wherein the intermediate entity is an intermediate colloid particle, and at least one of linkage between the colloid particle and the intermediate colloid particle or linkage between the intermediate colloid particle and the non-colloidal structure involves EDC/NHS chemistry.

35. A method as in claim 3, wherein the intermediate entity is an intermediate colloid particle, and at least one of the colloid particle or the intermediate colloid particle includes a SAM on a surface thereof.

36. A method as in claim 35, wherein the SAM includes a chelate coordinating a metal.

37. A method as in claim 3, wherein at least one of the colloid particle or the intermediate entity includes an auxiliary signaling entity.

38. A method as in claim 37, wherein at least one of the colloid particle or the intermediate entity includes a self-assembled monolayer on a surface thereof.

39. A method as in claim 38, wherein the colloid particle includes a self-assembled monolayer on a surface thereof and an auxiliary signaling entity.

40. A method as in claim 37, wherein the auxiliary signaling entity is on the colloid particle.

41. A method as in claim 37, comprising a first signal-participating species on the colloid particle and a second signal-participating species on the intermediate entity, wherein the first and second signal-participating species produce an identifiable signal based on their proximity to each other.

42. A method as in claim 41, wherein the first signal-participating species is a fluorescent moiety and the second signal-participating species is a quencher of the fluorescent species.

43. A method as in claim 42, wherein the intermediate entity is an intermediate colloid particle.